IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A method comprising:

forming a dielectric layer, the dielectric layer having a layer of hafnium oxide and a layer of a lanthanide oxide, including:

forming the layer of hafnium oxide by atomic layer deposition; and

forming the layer of a lanthanide oxide by electron beam evaporation, wherein the layer of hafnium oxide is in contact with the layer of lanthanide oxide.

2. (Original) The method of claim 1, wherein the method further includes forming the layer of hafnium oxide on a substrate and forming the layer of lanthanide oxide on the layer of hafnium oxide.

3. (Original) The method of claim 1, wherein the method further includes forming the layer of lanthanide oxide on a substrate and forming the layer of hafnium oxide on the layer of lanthanide oxide.

4. (Original) The method of claim 1, wherein the method further includes controlling the forming of the layer of hafnium oxide and the forming of the layer of the lanthanide oxide to form a lanthanide oxide/hafnium oxide nanolaminate.

5. (Original) The method of claim 1, wherein the method further includes limiting a combined thickness of lanthanide oxide layers to between about 2 nanometers and about 10 nanometers.

6. (Original) The method of claim 1, wherein the method further includes limiting a combined thickness of hafnium oxide layers to a thickness between about 2 nanometers and about 10 nanometers.

7. (Original) The method of claim 1, wherein the method further includes forming multiple layers of lanthanide oxide, each layer of lanthanide oxide limited to a thickness between about 2 nanometers and about 10 nanometers.

8. (Original) The method of claim 1, wherein forming a layer of a lanthanide oxide includes forming an oxide selected from Pr_2O_3, Nd_2O_3, Sm_2O_3, Gd_2O_3, and Dy_2O_3.

9. (Original) The method of claim 1, wherein the method further includes maintaining the substrate at a temperature ranging from about 100 °C to about 150 °C.

10. (Previously Presented) A method of forming a dielectric layer comprising:

forming a layer of hafnium oxide by atomic layer deposition; and

forming a layer of a lanthanide oxide by electron beam evaporation, wherein the layer of hafnium oxide is in contact with the layer of lanthanide oxide, wherein the method further includes adding oxygen during the electron beam evaporation of the layer of lanthanide oxide.

11. (Previously Presented) A method comprising:

forming a dielectric layer, the dielectric layer having a layer of hafnium oxide and a layer of a lanthanide oxide, including:

forming the layer of hafnium oxide on a substrate by atomic layer deposition using a HfI_4 precursor; and

forming the layer of a lanthanide oxide on the layer of hafnium oxide by electron beam evaporation.

12. (Original) The method of claim 11, wherein the method further includes controlling the forming of the layer of hafnium oxide and the forming of the layer of the lanthanide oxide to form a lanthanide oxide/hafnium oxide nanolaminate.

13. (Original) The method of claim 11, wherein the method further includes limiting a combined thickness of lanthanide oxide layers to a thickness between about 2 nanometers and about 10 nanometers.

14. (Original) The method of claim 11, wherein forming a layer of a lanthanide oxide includes forming an oxide selected from Pr_2O_3, Nd_2O_3, Sm_2O_3, Gd_2O_3, and Dy_2O_3.

15. (Original) The method of claim 11, wherein the method further includes maintaining the substrate at a temperature ranging from about 100 °C to about 150 °C.

16.-68. (Cancelled)

69. (Previously Presented) The method of claim 1, wherein forming the dielectric layer includes forming the dielectric layer in a capacitor.

70. (Previously Presented) The method of claim 1, wherein forming the dielectric layer includes forming the dielectric layer on a body region between a source and a drain in a transistor.

71. (Previously Presented) The method of claim 1, wherein forming the dielectric layer includes forming the dielectric layer on a body region between a source and a drain in a transistor in a memory.

72. (Previously Presented) The method of claim 1, wherein forming the dielectric layer includes forming the dielectric layer at least one of a controller and a device coupled to the controller in an electronic system.

73. (New) A method of forming a capacitor, comprising:

forming a first conductive layer on a substrate;

forming a dielectric layer on the first conductive layer, the dielectric layer having a layer of hafnium oxide and a layer of a lanthanide oxide; and

forming a second conductive layer on the dielectric layer, wherein forming the dielectric layer includes:

forming the layer of hafnium oxide on the first conductive layer by atomic layer deposition using a HfI_4 precursor; and

forming the layer of a lanthanide oxide on the layer of hafnium oxide by electron beam evaporation, wherein the layer of lanthanide oxide is limited to between about 2 nanometers and about 10 nanometers.

74. (New) The method of claim 73, wherein the method further includes controlling the forming of the layer of hafnium oxide and the forming of the layer of the lanthanide oxide on the layer of hafnium to form a lanthanide oxide/hafnium oxide nanolaminate.

75. (New) The method of claim 73, wherein forming a layer of a lanthanide oxide includes forming an oxide selected from Pr_2O_3, Nd_2O_3, Sm_2O_3, Gd_2O_3, and Dy_2O_3.

76. (New) The method of claim 73, wherein the method further includes maintaining the substrate at a temperature ranging from about 100 °C to about 150 °C.

77. (New) A method of forming a transistor comprising:

forming a source region and a drain region in a substrate, the source region and the drain region separated by a body region;

forming a dielectric layer on the body region between the source and drain regions, the dielectric layer containing a nanolaminate of hafnium oxide and a lanthanide oxide; and

coupling a gate to the dielectric layer, wherein forming the nanolaminate includes:

forming the layer of hafnium oxide by atomic layer deposition; and

forming the layer of a lanthanide oxide by electron beam evaporation, wherein the layer of hafnium oxide is in contact with the layer of lanthanide oxide.

78. (New) The method of claim 77, wherein the method further includes limiting a combined thickness of lanthanide oxide layers to a thickness between about 2 nanometers and about 10 nanometers.

79. (New) The method of claim 77, wherein the method further includes forming multiple layers of lanthanide oxide, each layer limited to a thickness of lanthanide oxide layers to between about 2 nanometers and about 10 nanometers.

80. (New) The method of claim 77, wherein forming a layer of a lanthanide oxide includes forming an oxide selected from Pr_2O_3, Nd_2O_3, Sm_2O_3, Gd_2O_3, and Dy_2O_3.

81. (New) The method of claim 77, wherein forming a layer of a hafnium oxide by atomic layer deposition includes using a hafnium halide as a precursor.

82. (New) The method of claim 77, wherein the method further includes maintaining the substrate at a temperature ranging from about 100 °C to about 150 °C.

83. (New) The method of claim 77, wherein the method further includes adding oxygen during the electron beam evaporation of the layer of lanthanide oxide.

84. (New) A method of forming a memory comprising:

forming a number of access transistors including forming a dielectric layer on a body region in a substrate between a source region and a drain region, the dielectric layer having a layer of hafnium oxide and a layer of a lanthanide oxide; and

forming a number of word lines, each word line coupled to one of the number of access transistors, wherein forming the dielectric layer includes:

forming the layer of hafnium oxide on the body region by atomic layer deposition; and

forming the layer of a lanthanide oxide on the layer of hafnium oxide by electron beam evaporation, wherein the layer of hafnium oxide is in contact with the layer of lanthanide oxide.

85. (New) The method of claim 84, wherein the method further includes limiting a combined thickness of lanthanide oxide layers to between about 2 nanometers and about 10 nanometers and limiting a combined thickness of hafnium oxide layers to between about 2 nanometers and about 10 nanometers.

86. (New) The method of claim 84, wherein the method further includes forming multiple layers of lanthanide oxide, each layer limited to a thickness of lanthanide oxide layers to between about 2 nanometers and about 10 nanometers.

87. (New) The method of claim 84, wherein forming a layer of a lanthanide oxide includes forming an oxide selected from Pr_2O_3, Nd_2O_3, Sm_2O_3, Gd_2O_3, and Dy_2O_3.

88. (New) The method of claim 84, wherein forming a layer of a hafnium oxide by atomic layer deposition includes using a hafnium halide as a precursor.

89. (New) The method of claim 84, wherein the method further includes maintaining the substrate at a temperature ranging from about 100 °C to about 150 °C.

90. (New) The method of claim 84, wherein the method further includes adding oxygen during the electron beam evaporation of the layer of lanthanide oxide.

91. (New) A method of forming an electronic system comprising:

providing a controller; and

coupling a device to the controller, wherein at least one of the controller and the device includes a dielectric layer having a nanolaminate of hafnium oxide and a lanthanide oxide, wherein forming the nanolaminate includes:

forming the layer of hafnium oxide by atomic layer deposition; and

forming the layer of a lanthanide oxide by electron beam evaporation, wherein the layer of hafnium oxide is in contact with the layer of lanthanide oxide.

92. (New) The method of claim 91, wherein the method further includes limiting a combined thickness of lanthanide oxide layers to between about 2 nanometers and about 10 nanometers.

93. (New) The method of claim 91, wherein the method further includes limiting a combined thickness of hafnium oxide layers to between about 2 nanometers and about 10 nanometers.

94. (New) The method of claim 91, wherein the method further includes forming multiple layers of lanthanide oxide, each layer limited to a thickness of lanthanide oxide layers to between about 2 nanometers and about 10 nanometers.

95. (New) The method of claim 91, wherein forming a layer of a lanthanide oxide includes forming an oxide selected from Pr_2O_3, Nd_2O_3, Sm_2O_3, Gd_2O_3, and Dy_2O_3.

96. (New) The method of claim 91, wherein forming a layer of a hafnium oxide by atomic layer deposition includes using a hafnium halide as a precursor.

97. (New) The method of claim 91, wherein the method further includes maintaining the substrate at a temperature ranging from about 100 °C to about 150 °C.

98. (New) The method of claim 91, wherein the method further includes adding oxygen during the electron beam evaporation of the layer of lanthanide oxide.